

Appl. No.: 10/632,980
Amdt. Dated: __ November 2005
Reply to Office Action mailed 08/12/2005

Amendments to the Claims:

Please amend the following claims as indicated. This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (currently amended) A brake pad assembly for a bicycle for urging brake pads against the sidewall of the bicycle wheel rim, the combination comprising:

an elongate support member having a longitudinally extending brake pad holder supported therefrom;

said brake pad holder having a closed end and a truncated open end, said holder including a continuous aligned planar flanged surface providing an inward protrusion that defines a perimeter defining a recess for sequentially receiving through said truncated open end multiple unitary brake pads in end abutting relationship along an axis parallel to the contact surface of said sidewall with said brake pads having indentations for mating with said protrusion and with selected brake pads composed of different braking compounds for imparting variously desired braking characteristics to said brake pad assembly;

said brake pad holder and said brake pads configured for interchangeability of said brake pads within said brake pad holder with each said brake pads having a bicycle wheel rim engaging surface generally coplanar with each other; and

closure means for mating with said truncated open end for securing said brake pads within said brake pad holder, said closure means having an end formed substantially identical to said closed end and an open end for mating with said truncated open end to receive a portion of the last inserted brake pad and to provide a continuous planar flanged recess for retaining said brake pads.

2. (currently amended) The brake pad assembly according to Claim 1 wherein said closure means comprises an end cap that slides over a reduced portion of said holder and mates respective planar flanged surfaces of said end cap and said holder to provide said continuous

planar flanged recess, said closure means further having locking means providing for secure engagement of said cap with said open truncated end.

3. (previously presented) The brake pad assembly according to Claim 1 wherein said brake pad holder has a longitudinal transverse curvature in conformance with the radius of curvature of said sidewall of the bicycle wheel rim and said brake pads are longitudinally aligned relative to one another and to said brake pad holder.

4. (currently amended) The brake pad assembly according to Claim 3 wherein each of said brake pads is comprised of a top portion for mounting into said brake pad holder and a bottom portion extending from said brake pad holder, said bottom portion having a braking surface for contact with the sidewall of said bicycle rim, said top portion and said bottom portions defined by said indentations ~~portion defined by an indentation~~ along each non-abutting longitudinal side of each said brake pad, said flange having inwardly projecting shoulders for mating with said indentations for capturing said top portion within said recess.

5. (previously presented) The brake pad assembly according to Claim 4 wherein said top portion includes a strengthening compound for preventing operational pull out of said brake pads from said brake pad holder and said bottom portion is comprised of a compound for imparting a particular braking characteristic to said brake pad.

6. (currently amended) The brake pad assembly according to Claim 3 ~~Claim 4~~ wherein the mating combination of said truncated brake pad holder and said end cap in combination provide a longitudinally and circumferentially extending inwardly projecting planar flange for interaction with said indentations ~~indentation~~ in said brake pads to slidably receive said brake pads and capture said top portion of each said brake pad securely within said brake pad holder.

7. (canceled)

8. (currently amended) The brake pad assembly according to Claim 1 wherein said closure means includes in combination

said indentations in said brake pads and mating inwardly projecting shoulders of said planar flanged surface in said brake pad holder, said brake pad indentations mating with said shoulders to slidably receive said brake pads along said shoulders;

a transverse recess in at least the last brake pad inserted into said holder; ~~one of said brake pads; and~~

an end cap complementary mating with said truncated end whereby a portion of said last inserted brake pad is encompassed by said end cap; and

having an associated locking pin cooperatively received by said end cap, said truncated end and said recess whereby said brake pads are captured within said brake pad holder.

9. (currently amended) A brake pad assembly for a bicycle for urging a longitudinally extending brake pad holder against the sidewall rim of the bicycle wheel, the combination comprising:

said brake pad holder having a longitudinal transverse curvature in conformance with the radius of curvature of said sidewall rim and a planar flanged surface defining an undercut groove ~~a configuration~~ for receiving a plurality of brake pads positioned in sequential abutting arrangement therein along an axis parallel to the contact surface of said sidewall, said brake pads configured for interchangeability within said brake pad holder with ~~and~~ selected ones of said brake pads composed of a different braking compound for imparting a different braking characteristic to said brake pad assembly;

said groove of said brake pad holder having a closed end ~~one end closed~~ with the other end a truncated open end for receiving said brake pads;

end cap complementary locking means configured substantially identical to said closed end for mating to said truncated end to thereby secure said pads ~~in longitudinal abutting arrangement~~ within said brake pad holder, said end cap configured to slide over a reduced dimensioned portion of said holder to receive a portion of the last inserted brake pad and to mate respective planar flanged surfaces of said end cap and said holder to provide a continuous planar flanged recess completely around the perimeter of the combination of said holder and said end cap for receiving and securing said brake pads therewithin; and

a locking device cooperatively received by said end cap and said truncated end whereby said end cap is securely engaged with said truncated end and said brake pads are secured within said brake pad holder.

~~said brake pads having an overlapping end and an under-lapping end with adjacent pads mated with said overlapping end over said under-lapping end;~~

~~said overlapping end in response to wheel rim movement pressure bearing down on said under-lapping end of an adjacent pad to thereby restrict pull out of said pads from said brake pad holder; and~~

~~said brake pad holder has a planar flanged surface for receiving said brake pads and a longitudinal transverse curvature in conformance with the radius of curvature of said sidewall rim.~~

10. (currently amended) The brake pad assembly according to Claim 9, wherein said brake pads each have an overlapping end and an under-lapping end with adjacent pads mated with said overlapping end over said under-lapping end; and

said overlapping end in response to wheel rim movement pressure bearing down on said under-lapping end of an adjacent pad to thereby restrict pull out of said pads from said brake pad holder. ~~said locking means comprising:~~

~~an end cap configured for mating to said truncated end whereby said plurality of brake pads are captured within said brake pad holder in alignment relative to one another and to said brake shoe;~~

~~a recess in at least one of said brake pads; and~~

~~a locking pin cooperatively received by said end cap, said truncated end and said recess whereby said brake pads are secured within said brake pad holder.~~

11. (currently amended) The brake pad assembly according to Claim 9 wherein the outside of said truncated end includes an inward cut to provide said [[a]] reduced dimension portion and said end cap has an interior cut to provide a mating portion configured for slipping over said reduced dimension portion to provide a continuous substantially identical planar flanged recess for said brake pads.

12. (currently amended) The brake pad assembly according to Claim 9 wherein each of said plurality of brake pads is comprised of a top portion and a bottom portion, the portions defined by undercut indentations ~~an undercut indentation~~ in said brake pads, each said brake pad holder and said end cap including said planar flanged surfaces circumferentially inwardly projecting ~~shoulder means~~ for mating with said indentations, said brake pads slidably received along said planar flanged surfaces ~~shoulder means~~ with said bottom portion extending from said brake pad holder and having a braking surface for planar contact with said bicycle wheel rim.

13. (previously presented) The brake pad assembly according to Claim 12 wherein said top portion and the associated undercut indentation includes a compound to provide resistance to brake pad pull out from said brake pad holder due to wheel rim moving forces and said second pad portion includes a compound to provide a desired breaking characteristic.

14. (previously presented) The brake pad assembly according to Claim 10 wherein the top surface of the outer shell of said brake pad holder includes exposed corrugated indentations providing for increased rigidity and strength.

15. (currently amended) A brake shoe assembly for a bicycle for urging a brake pad holder against the sidewall rim of the bicycle wheel, the assembly comprising:

an elongate longitudinally extending brake pad holder having a closed end and a truncated open end for receiving a plurality of unitary brake pads in abutting arrangement sequentially positioned within said brake pad holder along an axis parallel to the contact surface of said sidewall, each having a rim engaging braking surface generally coplanar with the other, said brake pads including pre-selected compounds for imparting a variety of braking characteristics to said brake pad assembly, said brake pad holder and said brake pads configured for slidable interchangeability of said brake pads within said brake pad holder;

each of said brake pads comprised of a top portion and a bottom portion defined by a longitudinal indentation undercut from said top portion on both sides thereof, said brake pad holder including circumferentially inwardly projecting shoulders configured for mating with said indentation whereby said brake pads are slidably received along said shoulders, said bottom portion extending from said brake pad holder and having a braking surface for contact with said bicycle wheel rim; and

end cap closure means configured substantially identical to said closed end for mating to said truncated end to thereby secure said pads within said brake pad holder, said end cap configured to slide over a reduced dimensioned portion of said holder to receive a portion of the last inserted brake pad and to mate respective planar flanged surfaces of said end cap and said holder to provide a continuous planar flanged recess completely around the perimeter of the combination of said holder and said end cap for receiving and securing said brake pads therewithin. ~~including circumferentially inwardly projecting shoulders for complementary~~

~~mating with said truncated end to thereby secure said brake pads within said brake pad holder aligned to each another and to said brake pad holder.~~

16. (previously presented) The brake pad assembly according to Claim 15 wherein said brake pads have an overlapping end and an under-lapping end with adjacent pads mated with said overlapping end over said under-lapping end, and said overlapping end bears down on said under-lapping end of the adjacent pads thereby aiding in prevention of pull out of said pads from said brake pad holder due to wheel rim movement pressure.

17. (currently amended) The brake pad assembly according to Claim 15 wherein said end cap closure means when mated to said truncated end encloses a portion of the last brake pad inserted into said truncated end, said last inserted brake pad having ~~includes at least one of said brake pads including~~ a transverse recess, said end cap, said recess and said truncated end configured for cooperatively receiving locking means for fixedly positioning and capturing said brake pads ~~said locking pin to fixedly position, capture and retain said brake pad portions~~ within said brake pad holder.

18. (currently amended) The brake pad assembly according to Claim 17 ~~Claim 15~~ wherein said brake pad holder has longitudinal transverse curvature in conformance with the radius of the bicycle wheel rim and each of said brake pads when mounted in said brake pad holder has a rim engaging surface generally coplanar with each other brake pad and with said sidewall of the bicycle wheel rim.

19. (currently amended) A method for selectively changing braking characteristics of a brake pad assembly for a bicycle comprising:

providing a longitudinal extending brake pad holder having a transverse curvature in conformance with the radius of curvature of the bicycle wheel rim, said pad holder including a closed end and a truncated open end for slidably receiving ~~inserting~~ selected brake pads in sequential abutting relationship in said brake pad holder ~~through said truncated end~~ along an axis parallel to the contact surface of said sidewall;

~~slidably~~ interchanging said brake pads as desired to provide different braking characteristics to said brake pad assembly;

providing end cap closure means configured substantially identical to said closed end for mating to said truncated end to thereby secure said pads within said brake pad holder, said end

cap configured to slide over a reduced dimensioned portion of said truncated end to receive a portion of the last inserted brake pad and to mate respective planar flanged surfaces of said end cap and said holder to provide a continuous planar flanged recess completely around the perimeter of the combination of said holder and said end cap for receiving and securing said brake pads therewithin. ~~complementary with said brake pad holder for mating with said truncated end and securing said brake pads within said brake pad holder; and~~

~~wherein said truncated end includes a reduced dimension portion and said end cap has a mating portion configured for slipping over said reduced dimension to provide a continuous substantially identical planar flanged recess for said brake pads.~~

20. (previously presented) The method of claim 19 wherein at least one of said brake pads has a top portion including a compound to provide resistance to brake pad pull out of said brake pad holder due to wheel rim moving forces and a bottom portion including a compound to provide a desired braking characteristic.